

Appl. No. 09/846,490
Amdt. dated August 22, 2005
Reply to Office Action of April 22, 2005

REMARKS/ARGUMENTS

Claims 37, 44-46, and 48-55 are amended, and claims 56-63 are newly added. Claims 1-36, 39, and 47 are canceled. Claims 37, 38, 40-46, and 48-63 are now pending in the application. Applicants respectfully request reexamination and reconsideration of the application.

Claim 44 was rejected under 35 USC § 102(b) as anticipated by U.S. Patent No. 4,916,002 to Carver ("Carver"). In addition, claims 37, 38, 40-43, and 45-55 were rejected under 35 USC § 103(a) as obvious in view of Carver. Applicants respectfully traverse these rejections.

Claim 37 is directed to a "method of fabricating tip structures" and includes steps of "depositing at least one layer of at least one conductive tip material into . . . openings [in a masking material], forming tip structures" and "joining the tip structures to previously fabricated contact structures." Claim 37 expressly states that the joining step occurs after the depositing step.

In contrast, in Carver, tip material 50 is deposited directly onto, among other elements, the silicon nitride layer 34, which was equated in the Office Action with the contact structure of claim 37. Because tip 50 is thus fabricated on the silicon nitride layer 34, there is no need for a separate step of joining the tip 50 to the silicon nitride layer 34 and certainly no need for a joining step that occurs after fabricating the tip 50. Nor does Carver suggest a separate joining step that occurs after fabricating tip 50.

Carver thus fails to teach or suggest, "*after said step of depositing at least one layer of at least one conductive tip material*, joining the tip structures to previously fabricated contact structures," as required by claim 37. Claim 37 is therefore patentable over Carver.

Applicants note that including a separate joining step that occurs after fabrication of the tips is not a mere design choice but provides advantages not found in Carver. For example, although claim 37 is not so limited, the process of claim 37 allows for more flexibility in making tip structures. That is, by disclosing no alternative other than fabricating tip 50 directly on, among other elements, the silicon nitride layer 34, Carver does not allow for as much flexibility in such things as the final shape of the tip, the materials that compose the tip, the timing during the fabrication process at which the tips are made, etc. as the process of claim 37 allows.

Claims 38 and 40-43 depend from claim 37 and are therefore also patentable over Carver.

Claim 44 includes "fabricating a tip structure on a first substrate" and "joining said tip structure to" a contact structure on a second substrate. Claim 44 specifies that the joining step occurs after the step of fabricating the tip structure. As discussed above, Carver does not teach or

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suggest joining tip 50 to silicon nitride layer 34 *after* fabricating tip 50. Carver therefore fails to render claim 44 obvious.

Claims 45-63 depend from claim 44 and are therefore also patentable over Carver.

In view of the foregoing, Applicants submit that all of the claims are allowable and the application is in condition for allowance. If the Examiner believes that a discussion with Applicants' attorney would be helpful, the Examiner is invited to contact the undersigned at (801) 536-6763.

Respectfully submitted,

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